

CLAIMS

I claim:

1. A method of manufacturing an optical transceiver module using a lead frame connector, comprising:

connecting a plurality of electrical contacts of a lead frame connector to corresponding leads of the optical sub-assembly to obtain a combined structure that includes the lead frame connector and the optical sub-assembly; and

connecting a plurality of leads of the lead frame connector to corresponding conductive structures on a printed circuit board of the optical transceiver module such that the lead frame connector electrically connects the optical sub-assembly to the printed circuit board.

2. The method as defined in claim 1, wherein connecting the plurality of electrical contacts comprises:

passing each of the leads of the optical sub-assembly through a hole in the corresponding electrical contact; and

soldering the leads to the corresponding electrical contacts.

3. The method as defined in claim 2, wherein soldering the leads to the corresponding electrical contacts is performed by applying the solder to the electrical contacts at a side of the lead frame connector that is opposite a side that is adjacent to the optical sub-assembly.

4. The method as defined in claim 1, wherein connecting the plurality of leads of the lead frame connector to the corresponding conductive structures on a printed circuit board comprises:

placing the leads of the lead frame connector in contact with the corresponding conductive structures; and
reflow soldering the leads to the conductive structures.

5. The method as defined in claim 1, wherein connecting the plurality of leads of the lead frame connector to the corresponding conductive structures on a printed circuit board comprises:

placing the leads of the lead frame connector in contact with the corresponding conductive structures; and
connecting the leads to the conductive structures using a hot bar process.

6. The method as defined in claim 1, wherein the optical sub-assembly is a transmitter optical sub-assembly.

7. The method as defined in claim 1, wherein the optical sub-assembly is a receiver optical sub-assembly.

8. The method as defined in claim 1, wherein connecting the plurality of electrical contacts to corresponding leads includes self-alignment of the lead frame connector

with respect to the optical sub-assembly as the corresponding leads pass through holes in the electrical contacts.

WORKMAN NYDEGGER
A PROFESSIONAL CORPORATION
ATTORNEYS AT LAW
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UTAH 84111

9. A method of manufacturing an optical transceiver module using a lead frame connector, comprising:

obtaining a lead frame connector that includes:

an electrically insulating casing; and

a plurality of conductors that are electrically isolated one from another by the electrically insulating casing, the plurality of conductors forming:

a plurality of electrical contacts that correspond to leads of the optical sub-assembly; and

a plurality of leads that correspond to conductive structures on the printed circuit board;

connecting the plurality of electrical contacts of the lead frame connector to the corresponding leads of the optical sub-assembly to obtain a combined structure that includes the lead frame connector and the optical sub-assembly; and

connecting the plurality of leads of the lead frame connector to the corresponding conductive structures on a printed circuit board of the optical transceiver module such that the lead frame connector electrically connects the optical sub-assembly to the printed circuit board.